

FORM PTO-1390 (REV 5-93)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTORNEY'S DOCKET NUMBER	
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371				951/48953	
				U.S. APPLICATION NO. (if known, see 37 CFR 1.5) 09/600335	
INTERNATIONAL APPLICATION NO. PCT/EP99/00103		INTERNATIONAL FILING DATE 11 January 1999		PRIORITY DATES CLAIMED 14 January 1998 and 27 May 1998	
TITLE OF INVENTION METHOD FOR OPERATING A VEHICLE, AND A DEVICE FOR CARRYING OUT SAID METHOD					
APPLICANT(S) FOR DO/EO/US Michael KOBLBAUER					
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:					
1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.					
2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371					
3. <input checked="" type="checkbox"/> This express request to begin national examination procedures (35 U.S.C. 371(f) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).					
4. <input checked="" type="checkbox"/> A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.					
5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2)).					
a. <input checked="" type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau).					
b. <input type="checkbox"/> has been transmitted by the International Bureau					
c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US)					
6. <input checked="" type="checkbox"/> A translation of the International Application into English (35 U.S.C. 371(c)(2)).					
7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))					
a. <input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau).					
b. <input type="checkbox"/> have been transmitted by the International Bureau.					
c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.					
d. <input checked="" type="checkbox"/> have not been made and will not be made.					
8. <input type="checkbox"/> A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).					
9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)) (unexecuted).					
10. <input type="checkbox"/> A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).					
Item 11. to 16. below concern other document(s) or information included:					
11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.					
12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.					
13. <input checked="" type="checkbox"/> A FIRST preliminary amendment.					
<input type="checkbox"/> A SECOND or SUBSEQUENT preliminary amendment.					
14. <input checked="" type="checkbox"/> A substitute specification and marked-up copy thereof.					
15. <input type="checkbox"/> A change of power of attorney and/or address letter.					
16. <input checked="" type="checkbox"/> Other items or information:					
a. 1 sheet of drawings showing Figs. 1-3;					
b. International Search Report					

U.S. APPLICATION NO (if known, see 37 CFR 1.5)		INTERNATIONAL APPLICATION NO		ATTORNEY'S DOCKET NUMBER	
09/600335		PCT/EP99/00103		951/48953	
17. [X] The following fees are submitted: Basic National Fee (37 CFR 1.492(a)(1)-(5)):				CALCULATIONS	PTO USE ONLY
Search Report has been prepared by the EPO or JPO \$840.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) ... \$670.00 No international preliminary examination fee paid to USPTO (37 CFR 1.482) but international search fee paid to USPTO (37 CFR 1.445(a)(2)) \$760.00 Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$ 970.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(2)-(4) \$96.00					
ENTER APPROPRIATE BASIC FEE AMOUNT =				\$840.00	
Surcharge of \$130.00 for furnishing the oath or declaration later than [] 20 [X] 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$130.00	
Claims	Number Filed	Number Extra	Rate		
Total Claims	18 - 20 =	0	X \$18.00	\$	
Independent Claims	2 - 3 =	0	X \$78.00	\$	
Multiple dependent claims(s) (if applicable)			+ \$260.00	\$	
TOTAL OF ABOVE CALCULATIONS =				\$970.00	
Reduction by 1/2 for filing by small entity, if applicable. Verified Small Entity statement must also be filed. (Note 37 CFR 1.9, 1.27, 1.28).				\$	
SUBTOTAL =				\$970.00	
Processing fee of \$130.00 for furnishing the English translation later than [] 20 [] 30 months from the earliest claimed priority date (37 CFR 1.492(f))				\$	
TOTAL NATIONAL FEE =				\$970.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28,3.31). \$40.00 per property +				\$	
TOTAL FEE ENCLOSED =				\$970.00	
				Amount to be:	\$
				refunded	
				charged	\$
a. [X] A check in the amount of \$970.00 for the filing fee is enclosed. b. [] Please charge my Deposit Account No. _____ in the amount of \$_____ to cover the above fees. A duplicate copy of this sheet is enclosed. c. [X] The Commissioner is hereby authorized to charge any additional fees, which may be required, or credit any overpayment to Deposit Account No. <u>05-1323</u> . A duplicate copy of this sheet is enclosed.					
NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.					
SEND ALL CORRESPONDENCE TO: Evenson, McKeown, Edwards & Lenahan, P.L.L.C. 1200 G Street, N.W., Suite 700 Washington, D.C. 20005 Tel. No. (202) 628-8800 Fax No. (202) 628-8844					
				SIGNATURE Jeffrey D. Sanok	
				NAME 32,169	
				REGISTRATION NUMBER July 14, 2000	
				DATE	
JDS:ps					

09/600335

534 Rec'd PCT/PTC 14 JUL 2000

Attorney Docket: 951/48953
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: MICHAEL KOBLBAUER

Serial No.: NOT YET ASSIGNED PCT NO.: PCT/EP99/00103

Filed: CONCURRENTLY HEREWITH

Title: METHOD FOR OPERATING A VEHICLE, AND A
DEVICE FOR CARRYING OUT SAID METHOD

PRELIMINARY AMENDMENT

Box PCT
Commissioner for Patents
Washington, D.C. 20231

Sir:

Please enter the following amendments to the specification,
claims and abstract prior to the examination of the application.

IN THE SPECIFICATION:

A substitute specification is submitted herewith.

IN THE CLAIMS:

Please cancel claims 1-12 presently in the application and
substitute new claims 13-30 as follows:

--13. A method for operating a vehicle in which access
authorization is determined via a dialogue between a control
device fixed in the vehicle and an authorization verification
device carried by a user, said authorization verification device
also enabling a starting of the vehicle drive unit, wherein the

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method interrogates said authorization verification device for the purpose of starting the vehicle drive unit independently of the said dialogue for establishing access authorization.

14. The method according to claim 13, wherein said interrogation occurs during a start of the operation of the vehicle drive unit.

15. The method according to claim 13, wherein said interrogation occurs during and/or after concluding the operation of the vehicle drive unit.

16. The method according to claim 14, wherein the interrogation also occurs during and/or after concluding the operation of the vehicle drive unit.

17. The method according to claim 15, wherein if an interrogation is unsuccessful after the start of the operation of the vehicle drive unit, the method mechanically unlocks a vehicle-fixed memory to provide an access authorization code.

18. The method according to claim 16, wherein if an interrogation is unsuccessful after the start of the operation

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of the vehicle drive unit, the method mechanically unlocks a vehicle-fixed memory to provide an access authorization code.

19. The method according to claim 17, further comprising the act conspicuously informing the user of the mechanical unlocking of the vehicle-fixed memory.

20. The method according to claim 18, further comprising the act conspicuously informing the user of the mechanical unlocking of the vehicle-fixed memory.

21. The method according to claim 19, wherein the act of conspicuously informing provides a visual and/or acoustical signal.

22. The method according to claim 20, wherein the act of conspicuously informing provides a visual and/or acoustical signal.

23. The method according to claim 19, further comprising the act of ejecting said vehicle-fixed memory from a storage location when the vehicle drive unit is switched-off.

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24. The method according to claim 21, further comprising the act of ejecting said vehicle-fixed memory from a storage location when the vehicle drive unit is switched-off.

25. A system for carrying out a method of operating a vehicle, in which access authorization is determined in a dialogue between a control device, fixed in the vehicle, and an authorization verification device carried by a user, said authorization verification device also being used for starting a vehicle drive unit, wherein said authorization verification device is interrogated for the purpose of starting the vehicle drive unit independently of said dialogue for establishing access authorization, said system comprising:

an activating unit for the vehicle drive unit, said activating unit starting the vehicle drive unit; and

a vehicle-fixed memory forming a part of said activating unit for the vehicle drive unit, said vehicle-fixed memory being mechanically unlocked from the activating unit if an interrogation of said authorization verification device is unsuccessful after starting the vehicle drive unit.

26. The system according to claim 25, wherein said vehicle-fixed memory fits into the activating unit.

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27. The system according to claim 25, wherein said vehicle-fixed memory fits into said authorization verification device.

28. The system according to claim 26, wherein said vehicle-fixed memory fits into said authorization verification device.

29. The system according to claim 25, wherein an access verification authorization code is extracted from said vehicle-fixed memory.

30. The system according to claim 25, wherein said vehicle-fixed memory and a mechanical key form a constructional unit that is fit into said activating unit for the vehicle drive unit.--

IN THE ABSTRACT:

Please add an Abstract of the Disclosure submitted herewith on a separate page.

REMARKS

Entry of the amendments to the specification, claims and abstract before examination of the application is respectfully requested.


Serial No.

If there are any questions regarding this Preliminary Amendment or this application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #951/48953).

Respectfully submitted,

July 14, 2000


Jeffrey D. Sanok
Registration No. 32,169

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--ABSTRACT OF THE DISCLOSURE

According to the inventive method for operating a vehicle, the authorization to access the vehicle is given in a dialogue between a control device which is fixed in the vehicle and an authorization verification device which is carried by the user. Said authorization verification device is also used to enable the vehicle drive unit to start. According to the invention, the authorization verification device is interrogated for the purpose of starting the vehicle drive unit independently of the process for establishing access authorization. The invention also relates to a device for carrying out the inventive method. The memory of said device is part of an activating unit for the vehicle drive unit.--

534 Rec'd PCT/PTC 14 JUL 2000

METHOD FOR OPERATING A VEHICLE, AND A DEVICE FOR CARRYING
OUT SAID METHOD

The invention relates to a method for operating a vehicle and to a device for carrying out the method.

The method according to the invention is based on a method having the characteristics of the preamble of Claim 1.

A method of this type is known from German Patent Document DE 36 15 890 A. In that document, the dialogue between the control device and the authorization verification device (BNE) is carried out in a wireless manner. The authorization verification device is, for example, a transponder which receives an interrogation signal emitted by the control device and emits a response signal with a response code. If the user is authorized, the control device recognizes this user because of the correct response code and permits or implements the unlocking of the vehicles doors. In the case of the known method, it will then be easily possible to start the vehicle drive unit. A rotary button provided for this purpose is combined with the steering wheel lock and can easily be operated. The problem arises in this case that, for starting the vehicle drive unit, it is sufficient to unlock the

vehicle. A vehicle passenger can therefore also start the operation of the vehicle drive unit if the authorized vehicle user carrying the BNE does not want him to do so.

The described problem becomes particularly serious when the access authorization is queried in a form known from German Patent Document DE 195 16 316 A. There the question-answer dialogue is already carried out when the authorized user approaches the door handle with his hand. If he does this, for example, not with the intention of opening the vehicle door and does not recognize that the dialogue has nevertheless resulted in his identification and the vehicle is unlocked, it will then be possible for a third party to enter the vehicle and start the drive unit without the authorized user's knowledge.

In addition to the known method, it will in the future also be possible to verify the access authorization by individual body-related characteristics. An identification is known, for example, which takes place by means of a finger print or a speech recognition. Also in the case of such a physiological authorization verification device, in the quasi automatic clearing of the vehicle drive unit known from German Patent Document DE 36 15 890 A, there is the problem of an undesired or unauthorized start of the operation of the this unit.

It is an object of the invention to provide a method of the initially mentioned type in which this problem is eliminated.

The invention achieves this object by means of the characteristics of Claim 1.

Because the authorization to start the operation of the vehicle drive unit is now no longer coupled to a mechanical ignition key, the problem of a loss of the memory during the operation of the vehicle drive unit occurs particularly when an electronic memory is provided for the access authorization verification. This loss may be unnoticed by the authorized user; for example, in that the memory is removed unnoticed from the vehicle.

The same problem occurs when the memory loses its capacity to transmit the access authorization code. For example, in the event of an electric defect of the BNE, which occurs during the operation of the vehicle drive unit, the BNE will be ineffective and will no longer permits the subsequent start of the operation of the vehicle drive unit. This takes place, for example, if the drive unit is constructed as an internal-combustion engine and the latter must be stopped for a short time in front of a closed grade crossing.

Because the access code must be transmitted for the start of the operation of the vehicle drive unit, this results in a considerable problem for the vehicle user. In order to avoid this problem, the query of the access code can also take place during and/or after the conclusion of the operation of the vehicle drive unit. The query during the operation makes it possible to rapidly detect the loss. The prerequisite is only a corresponding frequency of the query.

The query after the conclusion of the operation permits at least the taking of appropriate measures in order to then be able to start the vehicle again. The result of the query of the access code during or after the conclusion of the operation of the vehicle drive unit may be the emission of a warning signal. With respect to the above, it is advantageous to provide in this case a vehicle-fixed memory for the access code which will then be unlocked and can, for example, also be removed from the vehicle by the user.

This memory is provided in addition to the actual memory for the access code. This redundant memory will then be operative. It may be constructed as a mechanical part which is inserted in the authorization verification device and functionally replaces the memory for the access code provided there which may be defective. The memory can then be inserted alone or together with the BNE in an activating part for the

start of the operation or the operation of the vehicle drive unit. It can also be connected with a mechanical key which is then placed in an ignition lock and permits the start of the operation of the vehicle drive unit in the conventional manner.

In order to indicate to the vehicle user that the redundant memory has become effective, the vehicle user can be conspicuously informed of the implemented unlocking of the vehicle-fixed memory. This clearly reduces the danger of an accidental leaving of the redundant memory in the vehicle and the related possibility of a start of the vehicle by the unauthorized user.

If, in the process, the memory is ejected out of its receiving device, this special situation is not only clearly pointed out to the vehicle user but is also caused to pay special attention to the locking operation of the vehicle and to optionally carry out the locking conventionally, for example, by means of a mechanical key which, as a rule, is also present.

This eliminates the risk of enabling in an emergency by the measures provided for this purpose an unauthorized person to use the vehicle. The authorized user is caused to carry out the required measures (such as the removal of the

redundant memory) himself.

The invention will be further explained by means of the drawing.

Figure 1 is a frontal view of an activating unit for a vehicle drive unit;

Figure 2 is a top view of a pertaining authorization verification device; and

Figure 3 is a top view of the authorization verification device of Figure 2 supplemented by a constructional unit which permits the start of the operation of the vehicle drive unit in the event of an emergency.

Figure 1 illustrates an activating unit 1 for a vehicle drive unit which is not shown and by means of which the operation of the drive unit can be started. For this purpose, a rotatable part 2 of the unit 1 is rotated in the direction indicated by arrows 3. The successively arranged arrows 3 and 4 indicate the succession of two rotating movements by which, during the first rotating movement, the ignition circuit (not shown) of the vehicle is first closed in the conventional manner and, as a result of a further rotation (arrow 4), the starter circuit is also closed and the operation of a starter,

which is also not shown, is started. As a result, the drive unit, here assumed to be an internal-combustion engine, can be started.

It is important in this case that the starting in the normal situation, that is, when the existing components are operating properly, the starting takes place without inserting a conventional ignition key in the activating unit 1.

In order to check the authorization for starting the operation of the drive unit, an authorization verification device 5 is provided which contains a memory (not shown) for an access authorization code and which, in addition, is constructed in the conventional manner as a remote control signal generator. It has push buttons 6 and 7 for the remote unlocking of the central locking system (6) or of the trunk (7) as well as additionally a push button 8 for emitting a remote control signal for locking the doors and the flaps of the vehicle. When the push button 6 or 7 is activated, the memory for the access authorization code is read out and emits in a known manner the authorization verification code which also changes in a known manner with each activation corresponding to a defined algorithm and therefore ensures a protection against monitoring. The code is received by a control unit provided in the vehicle. If it corresponds to the expected code, the corresponding remote control command is

implemented.

It is also provided that a previously closed vehicle can be opened without the emission of a remote control signal. As known per se from German Patent Document DE 35 36 377 A, for this purpose, a dialogue is triggered between the control unit and the device 5 when a door handle is operated and, if the expected code is emitted by the device 5, the locking of the vehicle is eliminated and the access is permitted.

For starting the operation of the drive unit, by means of the rotating of part 2 in the direction of the arrows 3 and 4, an interrogation signal is also emitted which is received by the device 5 and, as described above, in the case of the question-and-answer dialogue for the access, is answered by the emission of the access authorization code. The control unit receives this code and, if it corresponds to the expected code, enables the ignition current and starter current circuit.

As a result, it is possible to start the vehicle without using a conventional mechanical ignition key. On the other hand, by the query of the access authorization code before the start of the operation of the drive unit, it is ensured that the unit 5 is situated inside the vehicle. Thus ensures that the user who has accessed the vehicle in an authorized manner,

is now most probably sitting inside the vehicle; that is, the start of the operation of the vehicle drive unit most probably is initiated by him or at least with his approval.

For the event that, after the drive unit has been started, the unit 5 is removed from the vehicle or becomes inoperative, an additional measure is provided. This measure first consists of querying the authorization code at defined points in time. This may take place when the drive unit is switched off. However, it may also occur when the drive unit is restarted without a previous opening and closing of a vehicle door, or also at regular time intervals during the operation of the drive unit. For this purpose, the access authorization code is always queried by the control unit and, if the unit 5 is disposed inside the vehicle and is operative, the verification of the authorization and of the operatability of the unit 5 is supplied by the emission of the access authorization code.

In the assumed fault cases, the access authorization code will no longer be emitted upon the query. In order to even then still ensure the proper operation of the vehicle and permit the restarting of the drive unit, an additional memory 9 is provided inside the device 1, which memory 9 also contains the access authorization code and which is locked inside the device 1. In the event of the described emergency,

the locking (not shown) is eliminated. The memory 9 can therefore be removed from the device 1.

The memory 9 forms a constructional unit with a mechanical key 10 which can be fitted into the unit 5. This is illustrated in Figure 3. In this case, the memory 9 replaces the memory provided in the unit 5. This memory 9 supplies the access authorization code which is emitted by the unit 5, either by the operation of the push buttons 6 or 7 or upon the interrogation signal of the control unit.

If the energy accumulator (not shown) provided in the unit 5 is spent, a remote control signal cannot be emitted. Thus, a vehicle door can only be unlocked mechanically. This takes place in that the key 10 is pushed into a corresponding receiving device of a vehicle door lock.

Likewise, it is possible to start the drive unit in this case. For this purpose, the unit consisting of parts 9 and 10 is fitted into the device 5. Like a conventional ignition key, the key 10 is then used for permitting the starting of the operation of the drive unit by rotating the rotatable part 2. The opening and the starting of the vehicle can therefore take place conventionally at any time.

CLAIMS:

1. Method for operating a vehicle, in which the access authorization is determined in a dialogue between a control device which is fixed in the vehicle and an authorization verification device (BNE) which is carried by the user, and the authorization verification device (BNE) is also used for enabling the vehicle drive unit to start, characterized in that the authorization verification device (BNE) is interrogated for the purpose of starting the vehicle drive unit independently of the process for establishing access authorization.

2. Method according to Claim 1, characterized in that the interrogation takes place during the start of the operation of the vehicle drive unit.

3. Method according to Claim 1 or 2, characterized in that the interrogation also takes place during and/or after the conclusion of the operation of the vehicle drive unit.

4. Method according to Claim 3, characterized in that, if after the start of the operation of

the vehicle drive unit, the interrogation is unsuccessful, a vehicle-fixed memory for an access authorization code is mechanically unlocked.

5. Method according to Claim 4, characterized in that the vehicle user is conspicuously informed of the implemented unlocking of the vehicle-fixed memory.

6. Method according to Claim 1, characterized in that the information is supplied visually and/or acoustically.

7. Method according to Claim 5 or 6, characterized in that the vehicle-fixed memory is ejected when the vehicle drive unit is switched off.

8. System for implementing the method according to one of Claims 1 to 7, characterized in that the memory is part of an activating unit for the vehicle drive unit.

9. System according to Claim 8, characterized in that the memory can be fitted into the activating unit.

10. System according to Claim 8 or 9,
characterized in that the memory can be fitted into the
authorization verification device.

11. System according to Claim 7,
characterized in that the access verification authorization
code can be extracted from the memory.

12. System according to one of Claims 8 to 11,
characterized in that the memory and a mechanical key form a
constructional unit which can be fitted into the activating
unit for the vehicle drive unit.

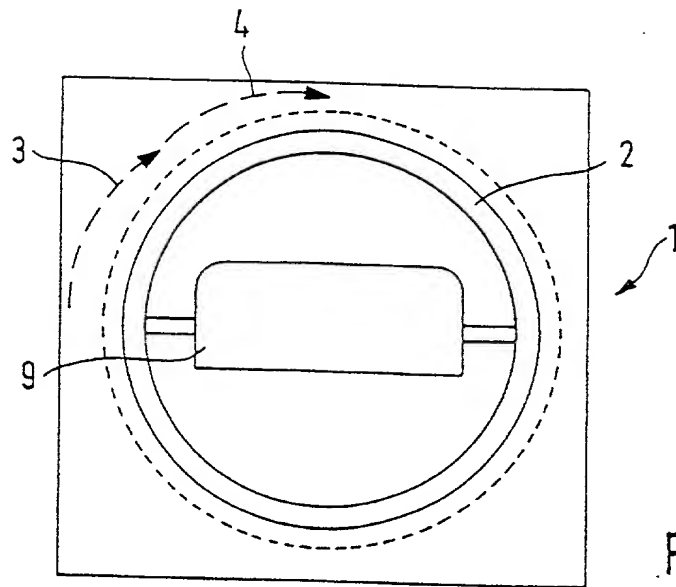


FIG. 1

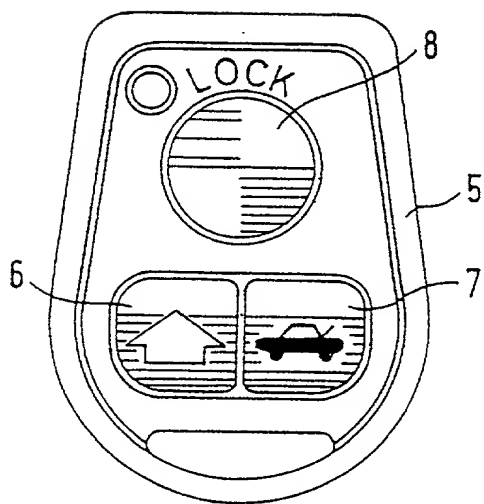


FIG. 2

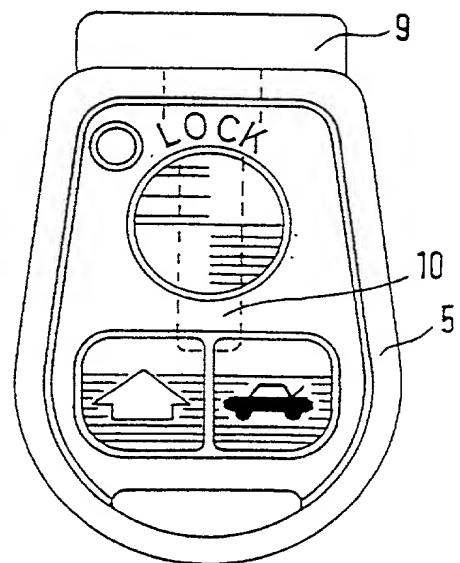


FIG. 3

09/600335

534 Rec'd PCT/PTO 14 JUL 2000
Attorney Docket: 951/48953
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: MICHAEL KOBLBAUER

Serial No.: NOT YET ASSIGNED PCT NO.: PCT/EP99/00103

Filed: CONCURRENTLY HEREWITH

Title: METHOD FOR OPERATING A VEHICLE, AND A
DEVICE FOR CARRYING OUT SAID METHOD

SUBMISSION OF SUBSTITUTE SPECIFICATION


Box PCT
Commissioner for Patents
Washington, D.C. 20231

Sir:

Attached is a Substitute Specification and a marked-up copy of the original specification. I certify that said substitute specification contains no new matter and includes the changes indicated in the marked-up copy of the original specification.

Respectfully submitted,

July 14, 2000


Jeffrey D. Sanok
Registration No. 32,169

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09/600335

Attorney Docket No. 951/48953
PATENT

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

SUBSTITUTE SPECIFICATION

INVENTION: METHOD FOR OPERATING A VEHICLE, AND
A DEVICE FOR CARRYING OUT SAID METHOD

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09/600335

METHOD FOR OPERATING A VEHICLE, AND
534 Rec'd PCT/PTC 14 JUL 2000

A DEVICE FOR CARRYING OUT SAID METHOD

BACKGROUND AND SUMMARY OF THE INVENTION

The invention relates to a method for operating a vehicle
5 and to a device for carrying out the method.

The method according to the invention is based on a method
in which access authorization is determined in a dialogue between
a control device, which is fixed in the vehicle, and an
authorization verification device (BNE), which is carried by the
10 user. The authorization verification device (BNE) is also used
for enabling the vehicle drive unit to start.

A method of this type is known from German Patent Document
DE 36 15 890 A. In that document, the dialogue between the
control device and the authorization verification device (BNE)
15 is carried out in a wireless manner. The authorization
verification device is, for example, a transponder which receives
an interrogation signal emitted by the control device and emits
a response signal with a response code. If the user is
authorized, the control device recognizes this user because of
20 the correct response code and permits or implements the unlocking
of the vehicles doors. In the case of the known method, it will
then be easily possible to start the vehicle drive unit. A
rotary button provided for this purpose is combined with the
steering wheel lock and can easily be operated. The problem

arises in this case that, for starting the vehicle drive unit, it is sufficient to unlock the vehicle. A vehicle passenger can therefore also start the operation of the vehicle drive unit if the authorized vehicle user carrying the BNE does not want him to do so.

The described problem becomes particularly serious when the access authorization is queried in a form known from German Patent Document DE 195 16 316 A. There, the question-answer dialogue is already carried out when the authorized user approaches the door handle with his hand. If he does this, for example, not with the intention of opening the vehicle door and does not recognize that the dialogue has nevertheless resulted in his identification and the vehicle is unlocked, it will then be possible for a third party to enter the vehicle and start the drive unit without the authorized user's knowledge.

In addition to the known method, it will in the future also be possible to verify the access authorization by individual body-related characteristics. An identification is known, for example, which takes place by means of finger prints or speech recognition. Also, in the case of such a physiological authorization verification device, in the quasi automatic clearing of the vehicle drive unit known from German Patent Document DE 36 15 890 A, there is the problem of an undesired or unauthorized start of the operation of this unit.

It is an object of the invention to provide a method of the above-mentioned type in which this problem is eliminated.

The invention achieves this object by a method for operating a vehicle, in which the access authorization is determined in a dialogue between a control device, which is fixed in the vehicle, and an authorization verification device (BNE), which is carried by the user. The authorization verification device (BNE) is also used for enabling the vehicle drive unit to start. The authorization verification device (BNE) is interrogated for the purpose of starting the vehicle drive unit independently of the process for establishing access authorization.

Because the authorization to start the operation of the vehicle drive unit is now no longer coupled to a mechanical ignition key, the problem of a loss of the memory during the operation of the vehicle drive unit occurs particularly when an electronic memory is provided for the access authorization verification. This loss may be unnoticed by the authorized user; for example, the memory may be removed unnoticed from the vehicle.

The same problem occurs when the memory loses its capacity to transmit the access authorization code. For example, in the event of an electrical defect of the BNE, which occurs during the operation of the vehicle drive unit, the BNE becomes ineffective

and no longer permits the subsequent start of the operation of the vehicle drive unit. This takes place, for example, if the drive unit is constructed as an internal-combustion engine, and the engine is stopped for a short time in front of a closed grade crossing.

Because the access code must be transmitted for starting the vehicle drive unit, this results in a considerable problem for the vehicle user. In order to avoid this problem, the query of the access code can also take place during and/or after the conclusion of the operation of the vehicle drive unit. The query during the operation makes it possible to rapidly detect the loss. The prerequisite is only a corresponding frequency of the query.

The query after the conclusion of the operation permits at least the taking of appropriate measures in order to then be able to start the vehicle again. The result of the query of the access code during or after the conclusion of the operation of the vehicle drive unit may be the emission of a warning signal. With respect to the above, it is advantageous to provide in this case a vehicle-fixed memory for the access code which will then be unlocked and can, for example, also be removed from the vehicle by the user.

This memory is provided in addition to the actual memory for the access code. This redundant memory will then be operative. It may be constructed as a mechanical part which is inserted in the authorization verification device and functionally replaces the memory for the access code provided there which may be defective. The memory can then be inserted alone or together with the BNE in an activating part for the start of the operation or the operation of the vehicle drive unit. It can also be connected with a mechanical key which is then placed in an ignition lock and permits the start of the operation of the vehicle drive unit in the conventional manner.

In order to indicate to the vehicle user that the redundant memory has become effective, the vehicle user can be conspicuously informed of the implemented unlocking of the vehicle-fixed memory. This clearly reduces the danger of an accidental leaving of the redundant memory in the vehicle and the related possibility of a start of the vehicle by the unauthorized user.

If, in the process, the memory is ejected out of its receiving device, this special situation is not only clearly pointed out to the vehicle user but is also caused to pay special attention to the locking operation of the vehicle and to optionally carry out the locking conventionally, for example, by means of a mechanical key which, as a rule, is also present.

This eliminates the risk of enabling in an emergency by the measures provided for this purpose an unauthorized person to use the vehicle. The authorized user is caused to carry out the required measures (such as the removal of the redundant memory) himself.

The invention will be further explained by means of the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a frontal view of an activating unit for a vehicle drive unit;

Figure 2 is a top view of a pertaining authorization verification device; and

Figure 3 is a top view of the authorization verification device of Figure 2 supplemented by a constructional unit which permits the start of the operation of the vehicle drive unit in the event of an emergency.

DETAILED DESCRIPTION OF THE DRAWINGS

Figure 1 illustrates an activating unit 1 for a vehicle drive unit (not shown) by which the operation of the drive unit can be started. For this purpose, a rotatable part 2 of the unit 1 is rotated in the direction indicated by arrows 3. The

successively arranged arrows 3 and 4 indicate the succession of two rotating movements by which, during the first rotating movement, the ignition circuit (not shown) of the vehicle is first closed in the conventional manner and, as a result of a further rotation (arrow 4), the starter circuit is also closed and the operation of a starter, which is also not shown, is started. As a result, the drive unit, here assumed to be an internal-combustion engine, can be started.

It is important here that for starting in the normal situation, that is, when the existing components are operating properly, the starting takes place without inserting a conventional ignition key in the activating unit 1.

In order to check the authorization for starting the operation of the drive unit, an authorization verification device 5 is provided. This device 5 contains a memory (not shown) for an access authorization code, and, in addition, is constructed in the conventional manner as a remote control signal generator. It has push buttons 6 and 7 for the remote unlocking of the central locking system (6) or of the trunk (7), as well as an additional push button 8 for emitting a remote control signal for locking the doors and the trunk of the vehicle. When the push button 6 or 7 is activated, the memory for the access authorization code is read out and emits in a known manner the authorization verification code - which also changes in a known

manner with each activation corresponding to a defined algorithm and therefore ensures a protection against monitoring. The code is received by a control unit provided in the vehicle. If the code corresponds to the expected code, the corresponding remote control command is implemented.

It is also provided that a previously closed vehicle can be opened without the emission of a remote control signal. As known per se from German Patent Document DE 35 36 377 A, for this purpose, a dialogue is triggered between the control unit and the device 5 when a door handle is operated and, if the expected code is emitted by the device 5, the vehicle is unlocked and access is permitted.

For starting the operation of the drive unit, by means of the rotation of part 2 in the direction of the arrows 3 and 4, an interrogation signal is also emitted which is received by the device 5. As described above, in the case of the question-and-answer dialogue for the access, the interrogation signal is answered by the emission of the access authorization code from device 5. The control unit receives this code and, if it corresponds to the expected code, enables the ignition current and starter current circuit.

As a result, it is possible to start the vehicle without using a conventional mechanical ignition key. On the other hand,

by querying the access authorization code before the start of the operation of the drive unit, it is ensured that the unit 5 is situated inside the vehicle. This ensures that the user who accessed the vehicle in an authorized manner is now most probably sitting inside the vehicle; that is, the start of the operation of the vehicle drive unit most probably is initiated by him or at least with his approval.

For the event wherein the unit 5 is removed from the vehicle or becomes inoperative after the drive unit has been started, an additional measure is provided. This measure first consists of querying the authorization code at defined points in time. This may take place when the drive unit is switched-off. However, it may also occur when the drive unit is restarted without a previous opening and closing of a vehicle door, or also at regular time intervals during the operation of the drive unit. For this purpose, the access authorization code is always queried by the control unit and, if the unit 5 is disposed inside the vehicle and is operative, the verification of the authorization and of the operability of the unit 5 is supplied by the emission of the access authorization code.

In the assumed fault cases, the access authorization code will no longer be emitted upon the query. In order to even then still ensure the proper operation of the vehicle and permit the restarting of the drive unit, an additional memory 9 is provided

inside the device 1, which memory 9 also contains the access authorization code and which is locked inside the device 1. In the event of the described emergency, the locking (not shown) is eliminated. The memory 9 can therefore be removed from the device 1.

The memory 9 forms a constructional unit with a mechanical key 10 which can be fitted into the unit 5. This is illustrated in Figure 3. In this case, the memory 9 replaces the memory provided in the unit 5. This memory 9 supplies the access authorization code which is emitted by the unit 5, either by the operation of the push buttons 6 or 7 or upon the interrogation signal of the control unit.

If the power source (not shown) provided in the unit 5 is spent, a remote control signal cannot be emitted. Thus, a vehicle door can only be unlocked mechanically. This takes place in that the key 10 is pushed into a corresponding receiving device of a vehicle door lock.

Likewise, it is possible to start the drive unit in this case. For this purpose, the unit consisting of parts 9 and 10 is fitted into the device 5. Like a conventional ignition key, the key 10 is then used for permitting the starting of the operation of the drive unit by rotating the rotatable part 2.

The opening and the starting of the vehicle can therefore take place conventionally at any time.

CLAIMS:

1. Method for operating a vehicle, in which the access authorization is determined in a dialogue between a control device which is fixed in the vehicle and an authorization verification device (BNE) which is carried by the user, and the authorization verification device (BNE) is also used for enabling the vehicle drive unit to start, characterized in that the authorization verification device (BNE) is interrogated for the purpose of starting the vehicle drive unit independently of the process for establishing access authorization.

2. Method according to Claim 1, characterized in that the interrogation takes place during the start of the operation of the vehicle drive unit.

3. Method according to Claim 1 or 2, characterized in that the interrogation also takes place during and/or after the conclusion of the operation of the vehicle drive unit.

4. Method according to Claim 3, characterized in that, if after the start of the operation of the vehicle drive unit, the interrogation is unsuccessful, a vehicle-

fixed memory for an access authorization code is mechanically unlocked.

5. Method according to Claim 4, characterized in that the vehicle user is conspicuously informed of the implemented unlocking of the vehicle-fixed memory.

6. Method according to Claim 1, characterized in that the information is supplied visually and/or acoustically.

7. Method according to Claim 5 or 6, characterized in that the vehicle-fixed memory is ejected when the vehicle drive unit is switched off.

8. System for implementing the method according to one of Claims 1 to 7, characterized in that the memory is part of an activating unit for the vehicle drive unit.

9. System according to Claim 8, characterized in that the memory can be fitted into the activating unit.

10. System according to Claim 8 or 9,

characterized in that the memory can be fitted into the authorization verification device.

11. System according to Claim 7, characterized in that the access verification authorization code can be extracted from the memory.

12. System according to one of Claims 8 to 11, characterized in that the memory and a mechanical key form a constructional unit which can be fitted into the activating unit for the vehicle drive unit.

1/1

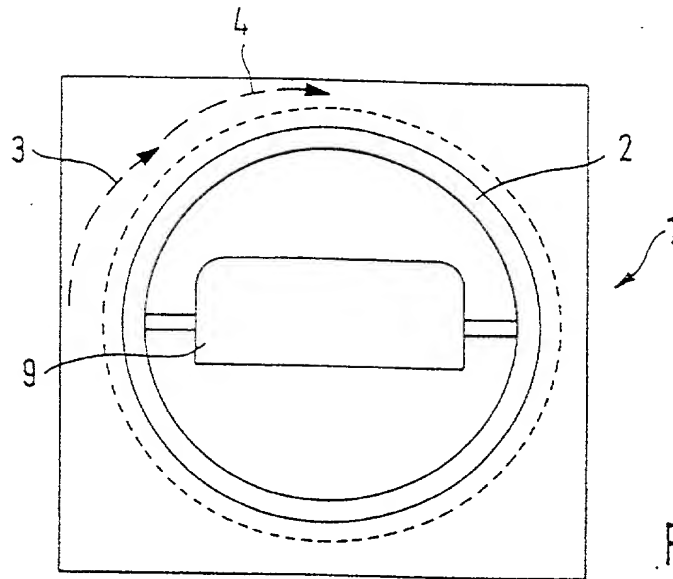


FIG. 1

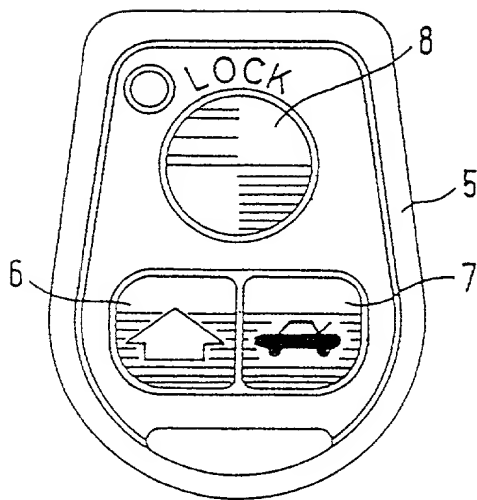


FIG. 2

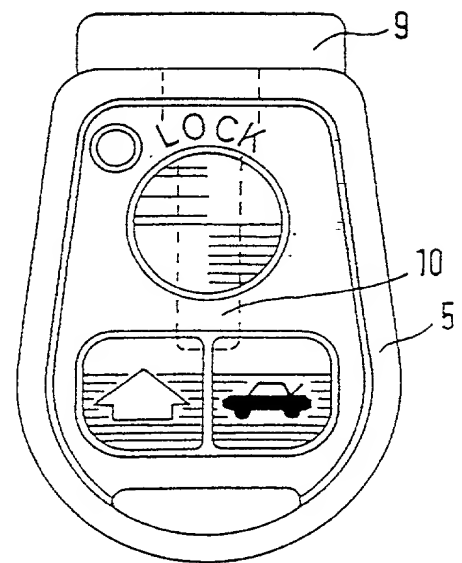


FIG. 3

METHOD FOR OPERATING A VEHICLE, AND
A DEVICE FOR CARRYING OUT SAID METHOD

BACKGROUND AND SUMMARY OF THE INVENTION

5 The invention relates to a method for operating a vehicle
and to a device for carrying out the method.

10 The method according to the invention is based on a method
[having the characteristics of the preamble of Claim 1.] in which
access authorization is determined in a dialogue between a
control device, which is fixed in the vehicle, and an
authorization verification device (BNE), which is carried by the
user. The authorization verification device (BNE) is also used
for enabling the vehicle drive unit to start.

15 A method of this type is known from German Patent Document
DE 36 15 890 A. In that document, the dialogue between the
control device and the authorization verification device (BNE)
is carried out in a wireless manner. The authorization
verification device is, for example, a transponder which receives
an interrogation signal emitted by the control device and emits
20 a response signal with a response code. If the user is
authorized, the control device recognizes this user because of
the correct response code and permits or implements the unlocking
of the vehicles doors. In the case of the known method, it will

then be easily possible to start the vehicle drive unit. A rotary button provided for this purpose is combined with the steering wheel lock and can easily be operated. The problem arises in this case that, for starting the vehicle drive unit, it is sufficient to unlock the vehicle. A vehicle passenger can therefore also start the operation of the vehicle drive unit if the authorized vehicle user carrying the BNE does not want him to do so.

The described problem becomes particularly serious when the access authorization is queried in a form known from German Patent Document DE 195 16 316 A. There, the question-answer dialogue is already carried out when the authorized user approaches the door handle with his hand. If he does this, for example, not with the intention of opening the vehicle door and does not recognize that the dialogue has nevertheless resulted in his identification and the vehicle is unlocked, it will then be possible for a third party to enter the vehicle and start the drive unit without the authorized user's knowledge.

In addition to the known method, it will in the future also be possible to verify the access authorization by individual body-related characteristics. An identification is known, for example, which takes place by means of [a] finger [print or a] prints or speech recognition. Also, in the case of such a physiological authorization verification device, in the quasi

automatic clearing of the vehicle drive unit known from German Patent Document DE 36 15 890 A, there is the problem of an undesired or unauthorized start of the operation of [the] this unit.

5 It is an object of the invention to provide a method of the [initially mentioned] above-mentioned type in which this problem is eliminated.

10 The invention achieves this object by [means of the characteristics of Claim 1.] a method for operating a vehicle, in which the access authorization is determined in a dialogue between a control device, which is fixed in the vehicle, and an authorization verification device (BNE), which is carried by the user. The authorization verification device (BNE) is also used for enabling the vehicle drive unit to start. The authorization verification device (BNE) is interrogated for the purpose of starting the vehicle drive unit independently of the process for establishing access authorization.

15 Because the authorization to start the operation of the vehicle drive unit is now no longer coupled to a mechanical
20 ignition key, the problem of a loss of the memory during the operation of the vehicle drive unit occurs particularly when an electronic memory is provided for the access authorization verification. This loss may be unnoticed by the authorized user;

for example, [in that] the memory [is] may be removed unnoticed from the vehicle.

The same problem occurs when the memory loses its capacity to transmit the access authorization code. For example, in the event of an [electric] electrical defect of the BNE, which occurs during the operation of the vehicle drive unit, the BNE [will be] becomes ineffective and [will] no longer permits the subsequent start of the operation of the vehicle drive unit. This takes place, for example, if the drive unit is constructed as an internal-combustion engine, and the [latter must be] engine is stopped for a short time in front of a closed grade crossing.

Because the access code must be transmitted for [the start of the operation of] starting the vehicle drive unit, this results in a considerable problem for the vehicle user. In order to avoid this problem, the query of the access code can also take place during and/or after the conclusion of the operation of the vehicle drive unit. The query during the operation makes it possible to rapidly detect the loss. The prerequisite is only a corresponding frequency of the query.

The query after the conclusion of the operation permits at least the taking of appropriate measures in order to then be able to start the vehicle again. The result of the query of the access code during or after the conclusion of the operation of

the vehicle drive unit may be the emission of a warning signal. With respect to the above, it is advantageous to provide in this case a vehicle-fixed memory for the access code which will then be unlocked and can, for example, also be removed from the vehicle by the user.

This memory is provided in addition to the actual memory for the access code. This redundant memory will then be operative. It may be constructed as a mechanical part which is inserted in the authorization verification device and functionally replaces the memory for the access code provided there which may be defective. The memory can then be inserted alone or together with the BNE in an activating part for the start of the operation or the operation of the vehicle drive unit. It can also be connected with a mechanical key which is then placed in an ignition lock and permits the start of the operation of the vehicle drive unit in the conventional manner.

In order to indicate to the vehicle user that the redundant memory has become effective, the vehicle user can be conspicuously informed of the implemented unlocking of the vehicle-fixed memory. This clearly reduces the danger of an accidental leaving of the redundant memory in the vehicle and the related possibility of a start of the vehicle by the unauthorized user.

If, in the process, the memory is ejected out of its receiving device, this special situation is not only clearly pointed out to the vehicle user but is also caused to pay special attention to the locking operation of the vehicle and to optionally carry out the locking conventionally, for example, by means of a mechanical key which, as a rule, is also present.

This eliminates the risk of enabling in an emergency by the measures provided for this purpose an unauthorized person to use the vehicle. The authorized user is caused to carry out the required measures (such as the removal of the redundant memory) himself.

The invention will be further explained by means of the [drawing] drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a frontal view of an activating unit for a vehicle drive unit;

Figure 2 is a top view of a pertaining authorization verification device; and

Figure 3 is a top view of the authorization verification device of Figure 2 supplemented by a constructional unit which

permits the start of the operation of the vehicle drive unit in the event of an emergency.

DETAILED DESCRIPTION OF THE DRAWINGS

Figure 1 illustrates an activating unit 1 for a vehicle drive unit [which is not shown and by means of] (not shown) by which the operation of the drive unit can be started. For this purpose, a rotatable part 2 of the unit 1 is rotated in the direction indicated by arrows 3. The successively arranged arrows 3 and 4 indicate the succession of two rotating movements by which, during the first rotating movement, the ignition circuit (not shown) of the vehicle is first closed in the conventional manner and, as a result of a further rotation (arrow 4), the starter circuit is also closed and the operation of a starter, which is also not shown, is started. As a result, the drive unit, here assumed to be an internal-combustion engine, can be started.

It is important [in this case that the] here that for starting in the normal situation, that is, when the existing components are operating properly, the starting takes place without inserting a conventional ignition key in the activating unit 1.

In order to check the authorization for starting the operation of the drive unit, an authorization verification device

5 is provided. This device 5 [which] contains a memory (not shown) for an access authorization code, and [which], in addition, is constructed in the conventional manner as a remote control signal generator. It has push buttons 6 and 7 for the remote unlocking of the central locking system (6) or of the trunk (7), as well as [additionally a] an additional push button 8 for emitting a remote control signal for locking the doors and the [flaps] trunk of the vehicle. When the push button 6 or 7 is activated, the memory for the access authorization code is read out and emits in a known manner the authorization verification code - which also changes in a known manner with each activation corresponding to a defined algorithm and therefore ensures a protection against monitoring. The code is received by a control unit provided in the vehicle. If [it] the code corresponds to the expected code, the corresponding remote control command is implemented.

It is also provided that a previously closed vehicle can be opened without the emission of a remote control signal. As known per se from German Patent Document DE 35 36 377 A, for this purpose, a dialogue is triggered between the control unit and the device 5 when a door handle is operated and, if the expected code is emitted by the device 5, the [locking of the vehicle is eliminated and the] vehicle is unlocked and access is permitted.

For starting the operation of the drive unit, by means of the [rotating] rotation of part 2 in the direction of the arrows 3 and 4, an interrogation signal is also emitted which is received by the device 5. As [and, as] described above, in the case of the question-and-answer dialogue for the access, the interrogation signal is answered by the emission of the access authorization code from device 5. The control unit receives this code and, if it corresponds to the expected code, enables the ignition current and starter current circuit.

As a result, it is possible to start the vehicle without using a conventional mechanical ignition key. On the other hand, by [the query of] querying the access authorization code before the start of the operation of the drive unit, it is ensured that the unit 5 is situated inside the vehicle. [Thus] This ensures that the user who [as] accessed the vehicle in an authorized manner[,] is now most probably sitting inside the vehicle; that is, the start of the operation of the vehicle drive unit most probably is initiated by him or at least with his approval.

For the event [that,] wherein the unit 5 is removed from the vehicle or becomes inoperative after the drive unit has been started, [the unit 5 is removed from the vehicle or becomes inoperative,] an additional measure is provided. This measure first consists of querying the authorization code at defined points in time. This may take place when the drive unit is

[switched off] switched-off. However, it may also occur when the drive unit is restarted without a previous opening and closing of a vehicle door, or also at regular time intervals during the operation of the drive unit. For this purpose, the access authorization code is always queried by the control unit and, if the unit 5 is disposed inside the vehicle and is operative, the verification of the authorization and of the [operatability] operability of the unit 5 is supplied by the emission of the access authorization code.

In the assumed fault cases, the access authorization code will no longer be emitted upon the query. In order to even then still ensure the proper operation of the vehicle and permit the restarting of the drive unit, an additional memory 9 is provided inside the device 1, which memory 9 also contains the access authorization code and which is locked inside the device 1. In the event of the described emergency, the locking (not shown) is eliminated. The memory 9 can therefore be removed from the device 1.

The memory 9 forms a constructional unit with a mechanical key 10 which can be fitted into the unit 5. This is illustrated in Figure 3. In this case, the memory 9 replaces the memory provided in the unit 5. This memory 9 supplies the access authorization code which is emitted by the unit 5, either by the

operation of the push buttons 6 or 7 or upon the interrogation signal of the control unit.

If the [energy accumulator] power source (not shown) provided in the unit 5 is spent, a remote control signal cannot be emitted. Thus, a vehicle door can only be unlocked mechanically. This takes place in that the key 10 is pushed into a corresponding receiving device of a vehicle door lock.

Likewise, it is possible to start the drive unit in this case. For this purpose, the unit consisting of parts 9 and 10 is fitted into the device 5. Like a conventional ignition key, the key 10 is then used for permitting the starting of the operation of the drive unit by rotating the rotatable part 2. The opening and the starting of the vehicle can therefore take place conventionally at any time.

CLAIMS:

1. Method for operating a vehicle, in which the access authorization is determined in a dialogue between a control device which is fixed in the vehicle and an authorization verification device (BNE) which is carried by the user, and the authorization verification device (BNE) is also used for enabling the vehicle drive unit to start, characterized in that the authorization verification device (BNE) is interrogated for the purpose of starting the vehicle drive unit independently of the process for establishing access authorization.

2. Method according to Claim 1, characterized in that the interrogation takes place during the start of the operation of the vehicle drive unit.

3. Method according to Claim 1 or 2, characterized in that the interrogation also takes place during and/or after the conclusion of the operation of the vehicle drive unit.

4. Method according to Claim 3, characterized in that, if after the start of the operation of the vehicle drive unit, the interrogation is unsuccessful, a vehicle-

fixed memory for an access authorization code is mechanically unlocked.

5. Method according to Claim 4, characterized in that the vehicle user is conspicuously informed of the implemented unlocking of the vehicle-fixed memory.

6. Method according to Claim 1, characterized in that the information is supplied visually and/or acoustically.

7. Method according to Claim 5 or 6, characterized in that the vehicle-fixed memory is ejected when the vehicle drive unit is switched off.

8. System for implementing the method according to one of Claims 1 to 7, characterized in that the memory is part of an activating unit for the vehicle drive unit.

9. System according to Claim 8, characterized in that the memory can be fitted into the activating unit.

10. System according to Claim 8 or 9,

characterized in that the memory can be fitted into the authorization verification device.

11. System according to Claim 7, characterized in that the access verification authorization code can be extracted from the memory.

12. System according to one of Claims 8 to 11, characterized in that the memory and a mechanical key form a constructional unit which can be fitted into the activating unit for the vehicle drive unit.

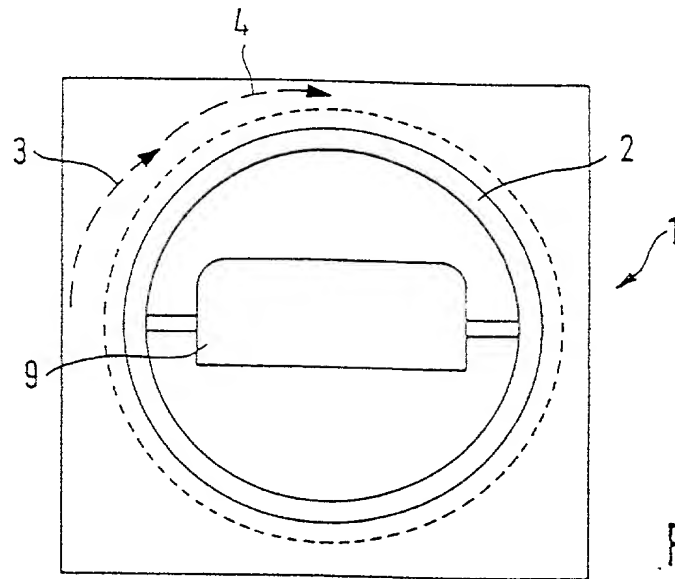


FIG. 1

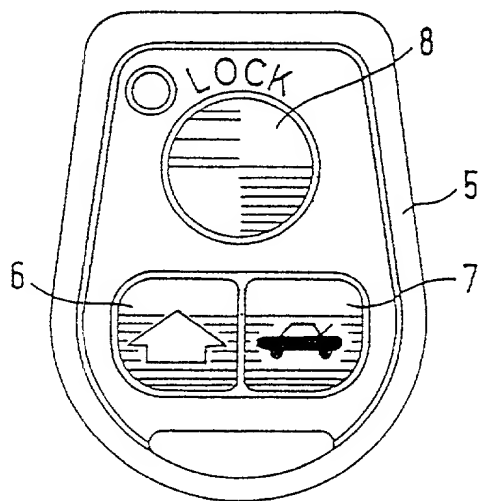


FIG. 2

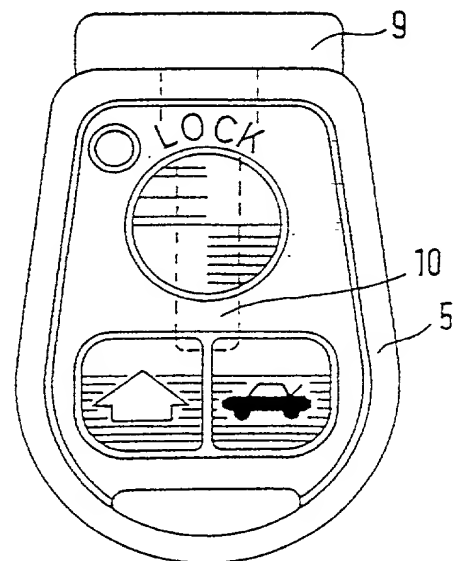


FIG. 3

COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY
(includes Reference to PCT International Applications)

ATTORNEY'S DOCKET NUMBER

951/48953

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

METHOD FOR OPERATING A VEHICLE, AND A DEVICE FOR CARRYING OUT SAID METHOD

the specification of which (check only one item below):

☐ is attached hereto.

☐ was filed as United States application

Serial No. _____

on _____

and was amended

on _____ (if applicable).

☒ was filed as PCT international application

Number PCT/EP99/00103

on 11 January 1999

and was amended under PCT Article 19

on _____ (if applicable).

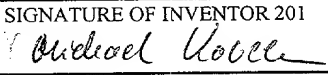
I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations. §1.56(a).

I hereby claim foreign priority benefits under Title 35, United State Code, §119 of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

PRIOR FOREIGN/PCT APPLICATION(S) AND ANY PRIORITY CLAIMS UNDER 35 U.S.C. 119:

COUNTRY (if PCT indicate PCT)	APPLICATION NUMBER	DATE OF FILING (day, month, year)	PRIORITY CLAIMED UNDER 35 USC 119
Germany	198 01 064.8	14 January 1998	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Germany	198 23 707.3	27 May 1998	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No

Combined Declaration For Patent Application and Power of Attorney (Continued) (includes Reference to PCT international Applications)				ATTORNEY'S DOCKET NUMBER 951/48953	
I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application(s) and the national of PCT international filing date of this application:					
PRIOR U.S. APPLICATIONS OR PCT INTERNATIONAL APPLICATIONS DESIGNATING THE U.S. FOR BENEFIT UNDER 35 U.S.C. 120					
U.S. APPLICATIONS			STATUS (Check one)		
U.S. APPLICATION NUMBER	U.S. FILING DATE		PATENTED	PENDING	ABANDONED
PCT APPLICATIONS DESIGNATING THE U.S.					
PCT APPLICATION NO	PCT FILING DATE	U.S. SERIAL NUMBERS ASSIGNED (IF ANY)			
<p>POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (List name and registration number)</p> <p style="text-align: center;">Herbert I. Cantor, Reg. No. <u>24,392</u>; James F. McKeown, Reg. No. <u>25,406</u>; Donald D. Evenson, Reg. No. <u>26,160</u>; Joseph D. Evans, Reg. No. <u>26,269</u>; Gary R. Edwards, Reg. No. <u>31,824</u>; and Jeffrey D Sanok, Reg. No. <u>32,169</u></p>					
Send Correspondence to:			Direct Telephone Calls to: (name and telephone number)		
<u>Evenson, McKeown, Edwards & Lenahan, P.L.L.C.</u> <u>1200 G Street, N.W., Suite 700</u> <u>Washington, D.C. 20005</u>			(202) 628-8800		
201	FULL NAME OF INVENTOR	FAMILY NAME	FIRST GIVEN NAME		SECOND GIVEN NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY		COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY		STATE & ZIP CODE/COUNTRY
		Brunnwiesenstr. 4	Aldorf-Pfetttrach		D-84032, Germany
202	FULL NAME OF INVENTOR	FAMILY NAME	FIRST GIVEN NAME		SECOND GIVEN NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY		COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY		STATE & ZIP CODE/COUNTRY
203	FULL NAME OF INVENTOR	FAMILY NAME	FIRST GIVEN NAME		SECOND GIVEN NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY		COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY		STATE & ZIP CODE/COUNTRY
<p>I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.</p>					
SIGNATURE OF INVENTOR 201		SIGNATURE OF INVENTOR 202		SIGNATURE OF INVENTOR 203	
					
DATE <u>20-07-2000</u>		Date		DATE	